

good  
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use for 2<sup>nd</sup> NF  
rejection

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ABSTRACT:

PROBLEM TO BE SOLVED: To improve transmission quality by using phase fluctuation formation of two consecutive pilot symbols so as to calculate a frequency offset between a transmission carrier and a quasi synchronization detection reference signal of a receiver so as to compensate the offset.

SOLUTION: The number of pilot symbols consisting of known data other than a frame symbol inserted in each frame is increased from one to two and the two pilot symbols are placed adjacent to each other. That is, one frame consists of N-sets of symbols and (N-2)-sets of information symbols are in existence before the pilot symbols. In a signal to be sent, the information symbols are repeated in each frame. Let a phase difference between the adjacent pilot symbols be  $\phi$  (pm), then a frequency offset  $\Delta\omega$  is expressed as  $\Delta\omega = A\phi$  (pm). Thus, the frequency offset between a transmission carrier and a reference signal for quasi synchronization detection of a receiver is calculated by using phase fluctuation information of the two consecutive pilot symbols for compensation.